

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A bulk material baler comprising:
a frame with a plurality of head walls;
a plurality of bale strap guide tracks deployed on said frame, each spaced to space-a plurality of bale strap loops substantially about 9 and 1/4 inches from adjacent bale strap guide tracks loops;
a plurality of bale strap drivers, each fixedly attached to ~~each one~~
of ~~[[a]]~~ the plurality of head walls and each driver being driven by an electro-servo motor, ~~each of said electro-servo motors being attached to each of said head walls~~, and each driver being operatively aligned with one of the bale strap guide tracks, each of said bale strap drivers driving a strap via by means of at least one pair of strap drive wheels, said wheels driving said strap by frictional contact with ~~[[said]]~~ the strap, each pair of strap drive wheels said at least one drive wheel pair being located in a plane perpendicular to the plane of said bale strap guide tracks loop, said at least one drive wheel pair being propelled by said electro-servo motor, and, wherein said wheels of the plurality of bale strap drivers drive driving said strap through at least two adjacent strap guide tracks simultaneously; and
a plurality of bale strap fasteners, each fixedly attached to ~~[[each]]~~ one of said head walls and each operatively aligned with one of the bale strap guide tracks.

2. (Currently Amended) The apparatus of Claim 1 wherein the bale strap guide tracks, strap ~~drives~~ drivers and fasteners are each six in number.

3. (Currently Amended) A bulk material baler comprising:

a baler base;

a plurality of head walls supported by a translating carriage slideably attached to said base;

a plurality of bale strap guide tracks supported by said head walls and configured to space a plurality bale strap loops substantially about 9 and 1/4 inches from adjacent bale strap loops;

a plurality of bale strap drivers supported by said head walls, each operatively aligned with one of said bale strap guide tracks, each of said bale strap drivers driving a strap via by means of at least one pair of strap drive wheels, ~~said wheels driving said strap~~ by frictional contact with said strap, ~~said at least one drive wheel pair each pair of strap drive wheels~~ being in a plane perpendicular to the plane of said bale strap loop, ~~said at least one drive wheel pair and~~ being propelled by ~~[[said]] a separate~~ electro-servo motor, ~~and said wheels driving said~~ wherein the plurality of bale strap drivers drive strap through at least two adjacent strap guide tracks simultaneously; and

a plurality of bale strap fasteners supported by said head walls and each operatively aligned with one of said bale strap guide tracks.

4. (Previously presented) The apparatus of Claim 3 wherein each of said bale strap fasteners is propelled by an electro-servo motor.

5. (Canceled).

6. (Previously presented) The apparatus of Claim 3 wherein said head walls are six in number, each of said heads supporting one bale strap guide track, one bale strap driver and one strap fastener.

7. (Original) The apparatus of Claim 6 wherein each of said strap fasteners is propelled by an electro-servo motor.

8. (Canceled).

9. (Original) The apparatus of Claim 3 wherein said carriage assembly has three support heads, each of said heads supporting one bale strap guide track, one bale strap driver and one strap fastener.

10. (Canceled).

11. (Canceled).

12. (Canceled).

13. (Canceled).

14. (Canceled).

15. (Canceled).

16. (Currently Amended) A bulk material baling apparatus comprising:

a bale forming and binding station~~[],~~ ; and

a bale binding device, said binding device employing strap for binding a bale of bulk material contained within said binding station, said binding device having a support bracket housing ~~at least one a plurality of~~ electro-servo strap propulsion ~~[[unit]] units~~, a plurality of articulated guide tracks and a plurality of fasteners fastening heads;

wherein said binding device receiving ~~[[a]]~~ strap wire through the plurality of strap propulsion ~~[[unit]] units~~, each of said propulsion ~~[[unit]] units~~ impelling ~~[[the]]~~ strap via by means of at least one pair of strap drive wheels, ~~said wheels driving said strap by frictional contact with~~ ~~[[said]]~~ the strap, said at least one drive wheel pair being in a plane perpendicular to the plane of said guide tracks bale strap-loop, said at least one drive wheel pair being propelled by an electro-servo motor, ~~and said wheels with said binding device driving~~ ~~[[said]]~~ strap through a plurality of adjacent articulated guide tracks simultaneously, said articulated guide tracks directing the strap in a trajectory surrounding the bale, said fastener, upon a length of the strap completing a circuit of the surrounding trajectory, fastening the complete circuit length of the strap into a closed loop about the bale; and

 said support bracket being configured to space ~~[[said]]~~ each closed loop of bale strap substantially about 9 $\frac{1}{4}$ inches apart from ~~[[an]]~~ adjacent closed loop of bale ~~[[wire]]~~ strap ~~[[loop]]~~.

17. (Original) The apparatus of Claim 16 wherein the bale strap guide tracks, strap propulsion units, propulsion electro-servo motors, fasteners and support brackets are each six in number.

18. (Cancelled).

19. (Cancelled).

20. (Previously presented) The apparatus of Claim 16 wherein a drive shaft of said electric servo motor is parallel to the plane of the bale strap loop.

21. (Currently Amended) The apparatus of Claim 17 wherein ~~[[a]]~~ drive shafts of all six of said propulsion units are parallel to the plane of said bale strap loops.

22. (Original) The apparatus of Claim 16 wherein the drive shaft of said electric servo motor is perpendicular to the plane of the said at least one pair of drive wheels.

23. (Cancelled).

24. (Cancelled).

25. (New) A device comprising:

a plurality of strap guide tracks located in substantially parallel planes for directing strapping into a loop;

a plurality of strap drivers, each with an electro-servo motor driving at least one pair of wheels for driving strapping by frictional contact; and

a plurality of strap fasteners for fastening strapping into a closed loop;

wherein:

the at least one pair of wheels of each driver are located in a plane perpendicular to the plane of the strap guide tracks;

each driver has a corresponding fastener; and

each driver is operatively aligned to feed strapping through one of the plurality of guide tracks and into the corresponding fastener.

26. (New) The device of claim 25, wherein the plurality of drivers drive strapping through two or more of the plurality of guide tracks simultaneously.

27. (New) The device of claim 26, wherein the guide tracks are spaced substantially about 9 and $\frac{1}{4}$ inches apart.

28. (New) The device of claim 27, wherein the strap guide tracks, strap drivers, and strap fasteners each are six in number.

29. (New) The device of claim 27, further comprising a carriage, wherein the plurality of drivers and the plurality of fasteners are affixed to the carriage and the carriage is operable to translate the plurality of drivers and the plurality of fasteners in a direction perpendicular to the plane of the guide tracks.

30. (New) The device of claim 27, wherein each guide track has one corresponding driver and one corresponding fastener.

31. (New) A device comprising:

a plurality of strap guide tracks;

a plurality of narrow head strap drivers operatively aligned to drive strapping into the strap guide tracks; and

a plurality of strap fasteners, each corresponding to one of the plurality of narrow head strap drivers;

wherein the plurality of strap drivers are operable to drive strapping simultaneously through multiple strap guide tracks.

32. (New) The device of claim 31, wherein each narrow head strap driver comprises:

an electro-servo motor; and

a plurality of strap drive wheels driven by the motor and located in a plane perpendicular to the plane of the guide tracks.

33. (New) The device of claim 31, further comprising a carriage, wherein the carriage is operable to translate the plurality of narrow head strap drivers and the plurality of strap fasteners in a plane perpendicular to the plane of the plurality of strap guide tracks.

34. (New) The device of claim 31, wherein each narrow head strap driver occupies no more than about 9 $\frac{1}{4}$ inches width.

35. (New) The device of claim 31, wherein each narrow head strap driver drives strapping through one of the plurality of strap guide tracks and into the corresponding strap fastener, which fastens the strapping to form a closed loop.

36. (New) The device of claim 31, wherein the strap guide tracks are spaced substantially about 9 $\frac{1}{4}$ inches apart.